

PAVEMENT MANAGEMENT WORKSHOP



COLORADO
TRANSPORTATION COMMISSION
JUNE 20, 2012



OVERVIEW OF PRESENTATION

- Review current pavement management procedure
- Discuss alternate model based on the least-cost to maintain acceptable driving conditions within tier-specific condition thresholds



PAVEMENT MANAGEMENT SYSTEM

- Why Pavement Management?
 - Facilitate the most effective use of limited dollars
 - Address Government Accounting Standards Board (GASB Statement 34)

PAVEMENT MANAGEMENT PROCESS

Required Inputs

Regional Inventory Data

[illegible]

Contracted Data Collection

Traffic Data from DTD



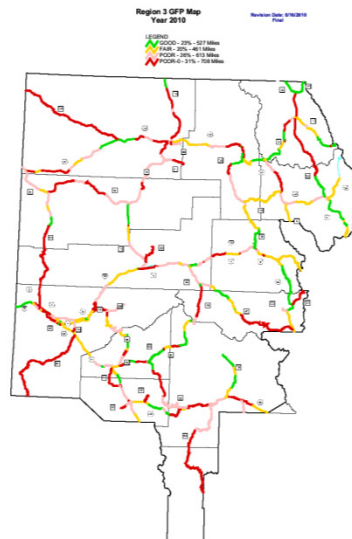
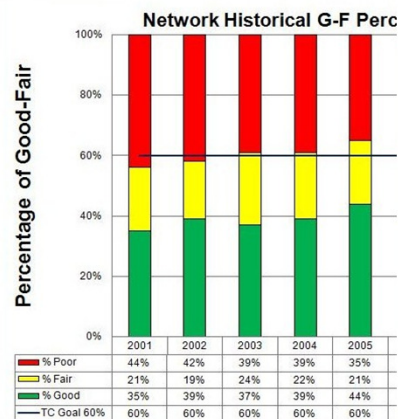
Treatment Types, Costs, Benefits, and Triggers

Budget \$\$\$

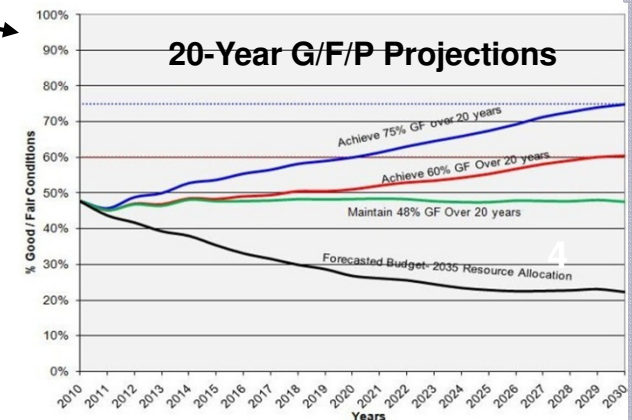
Pavement Management Model

Project Recommendations

Good/Fair/Poor Percentages & Maps



Resulting Outputs



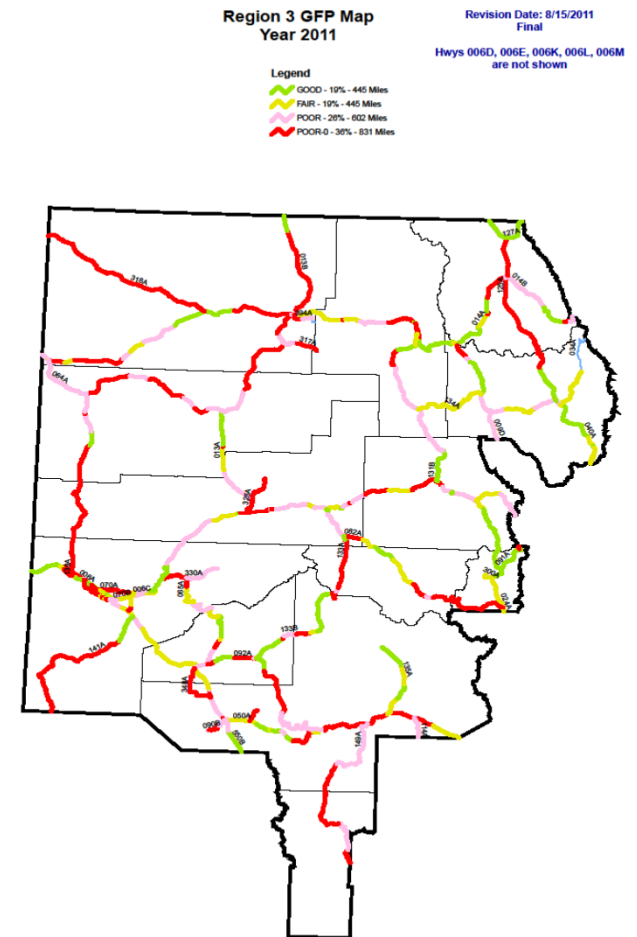
REMAINING SERVICE LIFE

Good- RSL \geq 11 yrs

Fair- RSL \geq 6 yrs & $<$ 11 yrs

Poor- RSL $<$ 6 years

Poor-o- RSL = 0 years



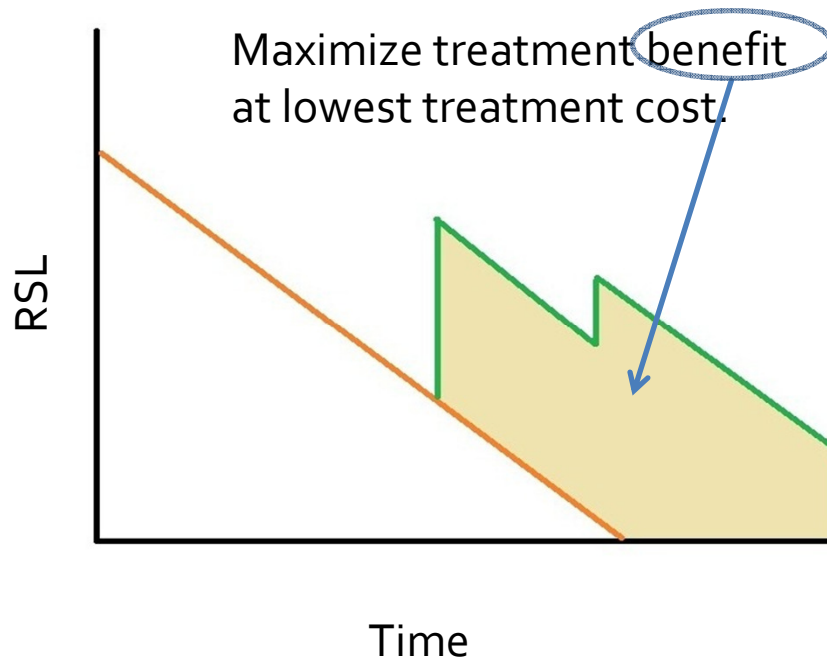


PAVEMENT MANAGEMENT ALTERNATIVES

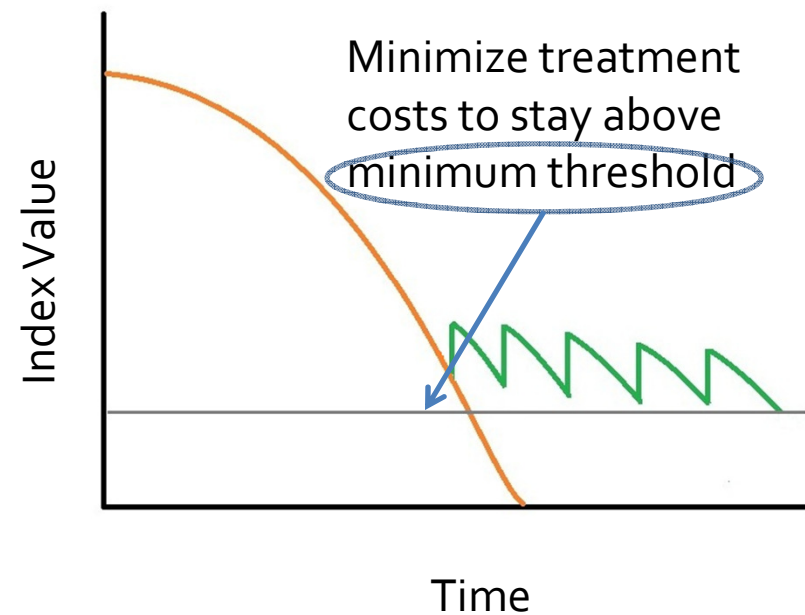
- CDOT uses a benefit-cost optimization approach to pavement management given Commission goals.
- Least cost represents an alternative approach to pavement management.

PAVEMENT MANAGEMENT ALTERNATIVES

Benefit-Cost Optimization



Least-Cost Analysis



RSL=0 AND DRIVABILITY

RSL=0 Acceptable Drivability



- Highway 6A
- Mile point 11.7
- Fatigue Index 55

RSL=0 Unacceptable Drivability



- Highway 257B
- Mile point 0.4
- Fatigue Index 9

CONCLUSIONS

- The current Pavement Management system uses a benefit-cost optimization based on RSL.
- Pavement Management procedures can be modified to a least-cost approach with minimal drivability and tier-specific condition expectations.
- The Pavement Management Program is currently working with our software vendor to modify our model to investigate outputs for very low volume roads.



Questions?

